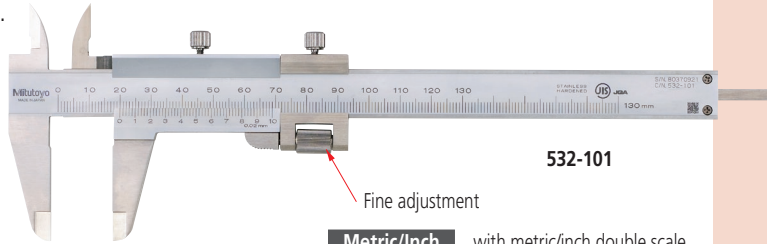


# Calipers

An industry standard in measuring tools

## Vernier Caliper 532 Series — with fine adjustment

- Fine-adjustment aids slider positioning.
- Allows step measurement.



### Technical Data

Accuracy:  $\pm 0.03\text{mm}$  ( $\leq 180\text{mm}$ ),  $\pm 0.04\text{mm}$  ( $\leq 280\text{mm}$ )  
 Graduation: 0.02mm, 0.02mm (.001") or .001" (1/128")

### SPECIFICATIONS

Metric				
Order No.	Range	Depth bar	Remarks	
532-101	0 - 130mm	Blade	with fine adjustment	
532-102	0 - 180mm			
532-103	0 - 280mm			

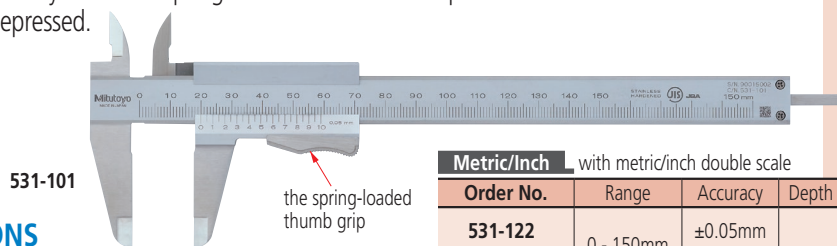
Metric/Inch with metric/inch double scale					
Order No.	Range	Depth bar	Inch graduation	Remarks	
532-119	0 - 130mm	Blade	.001"	with fine adjustment	
532-120	0 - 180mm				
532-121	0 - 280mm				

### DIMENSIONS

Range	A	B	D	E	F	H	L
0 - 130mm/0 - 5"	17	21.5	40	53.5	31.2	16	229
0 - 180mm/0 - 7"	20.5	25	50	53.5	31.2	16	288
0 - 280mm/0 - 11"	22	27.5	64	66.5	38	20	404

## Vernier Caliper 531 Series — with thumb clamp

- The slider moves only when the spring-loaded thumb grip is depressed.
- Allows step measurement.



### Technical Data

Accuracy: Refer to the list of specifications.  
 Graduation: 0.05mm, 0.05mm (1/128") or .001" (1/128")  
 High accuracy type:  
 0.02mm or 0.02mm (.001")

### SPECIFICATIONS

Metric				
Order No.	Range	Accuracy	Depth bar	Remarks
531-101	0 - 150mm	$\pm 0.05\text{mm}$	Blade	—
531-102	0 - 200mm	$\pm 0.05\text{mm}$		
531-103	0 - 300mm	$\pm 0.08\text{mm}$		

\* Graduation: 0.02mm

Metric/Inch with metric/inch double scale					
Order No.	Range	Accuracy	Depth bar	Inch graduation	Remarks
531-122	0 - 150mm	$\pm 0.05\text{mm}$	Blade	1/128"	with inch/mm conversion label
531-128*		$\pm 0.03\text{mm}$		.001"	High accuracy model
531-108	0 - 200mm	$\pm 0.05\text{mm}$		1/128"	—
531-129*		$\pm 0.03\text{mm}$		.001"	High accuracy model
531-109	0 - 300mm	$\pm 0.08\text{mm}$		1/128"	—
531-112*		$\pm 0.04\text{mm}$		.001"	High accuracy model

\* Graduation: 0.02mm

### DIMENSIONS

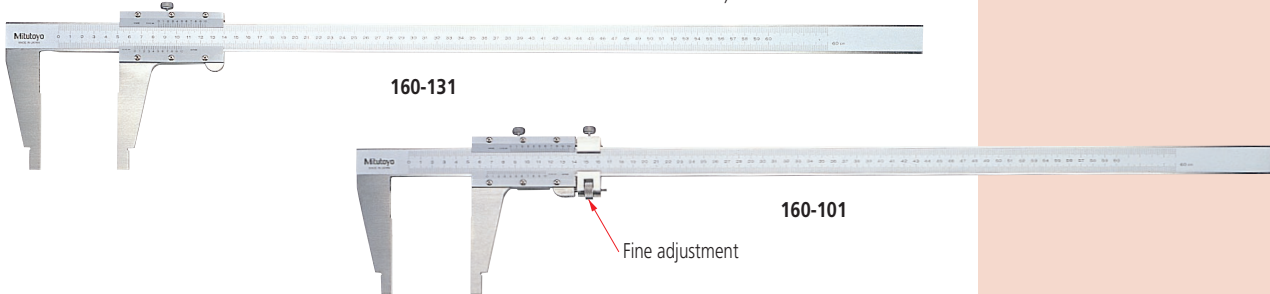
Range	A	B	D	H	L
0 - 150mm/0 - 6"	17	21.5	40	16	229
0 - 200mm/0 - 8"	20.5	25	50	16	288
0 - 300mm/0 - 12"	22	27.5	64	20	403

# Calipers

An industry standard in measuring tools

## Vernier Caliper SERIES 160 — with Nib Style Jaws and Fine Adjustment

- Inside and outside measurements can be read directly from the upper and lower vernier scales.
- The jaws have radiused measuring faces for accurate inside diameter (ID) measurement.
- With fine adjustment (except for 160-130/131/132/133/134).



### SPECIFICATIONS

**Metric** \_\_\_\_\_ with inside measurement vernier scale

Order No.	Range*	Accuracy	Graduations	Remarks
160-130	0 (20) - 450mm	±0.10mm	0.05mm	without fine adjustment
160-131	0 (20) - 600mm			
160-132	0 (20) - 1000mm			
160-133	0 (20) - 1500mm			
160-134	0 (20) - 2000mm			

\* ( ): Minimum dimension in ID measurement

**Metric** \_\_\_\_\_ with inside measurement vernier scale

Order No.	Range*	Accuracy	Graduations	Remarks
160-127	0 (10) - 300mm	±0.04mm	0.02mm	—
160-128	0 (20) - 450mm	±0.05mm		
160-101	0 (20) - 600mm	±0.05mm		
160-104	0 (20) - 1000mm	±0.07mm		
160-110	0 (20) - 1500mm	±0.1mm		
160-113	0 (20) - 2000mm	±0.12mm		

\* ( ): Minimum dimension in ID measurement

**Metric/Inch** \_\_\_\_\_ with metric/inch double scale

Order No.	Range*	Accuracy	Graduations	Remarks
160-150	0 (10) - 300mm	±0.04mm	0.02mm/.001"	+10mm/.394" to reading in inside measurement
160-151	0 (20) - 450mm	±0.05mm		+20mm/.787" to reading in inside measurement
160-153	0 (20) - 600mm	±0.05mm		
160-155	0 (20) - 1000mm	±0.07mm		
160-157	0 (20) - 1500mm	±0.1mm		
160-159	0 (20) - 2000mm	±0.12mm		

\* ( ): Minimum dimension in ID measurement

**Inch** \_\_\_\_\_ with inside measurement vernier scale

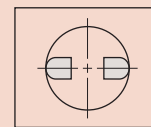
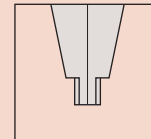
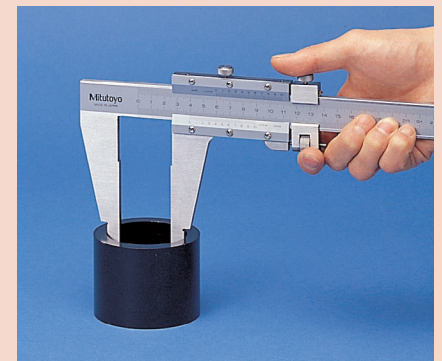
Order No.	Range*	Accuracy	Graduations	Remarks
160-124	0 (.3") - 12"	±.0015"	.001"	—
160-116	0 (.5") - 18"	±.002"		
160-102	0 (.5") - 24"			
160-105	0 (1") - 40"	±.003"		
160-111	0 (1") - 60"	±.004"		
160-114	0 (1") - 80"	±.005"		

\* ( ): Minimum dimension in ID measurement

**Inch/Metric** \_\_\_\_\_ with inch/metric double scale

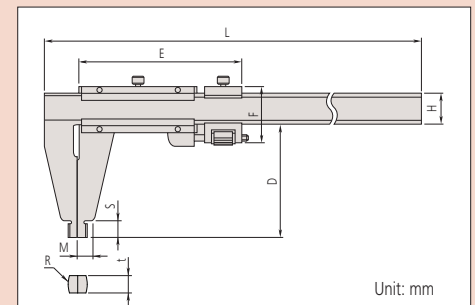
Order No.	Range*	Accuracy	Graduations	Remarks
160-125	0 (.3") - 12"	±.0015"	.001"/0.02mm	+3"/7.62mm to reading in inside measurement
160-119	0 (.5") - 18"	±.002"		+1"/25.4mm to reading in inside measurement
160-103	0 (.5") - 24"			
160-106	0 (1") - 40"	±.003"		
160-112	0 (1") - 60"	±.004"		
160-115	0 (1") - 80"	±.005"		

\* ( ): Minimum dimension in ID measurement



Radiused jaws for accurate ID measurement

### DIMENSIONS



Unit: mm

Range	D	E	F	H	L	M	R	S	t
0-300mm/0-12"	75	103	38	20	445	10	R 5	12	3.8
0-450mm*	100	89	—	25	630	14.8	R10	18	6
0-450mm/0-18"		112	51				R10	6	
0-600mm*	100	89	—	25	780	14.8	R10	18	6
0-600mm/0-24"		112	51				R10	6	
0-1000mm*	140	111	—	32	1240	17	R10	24	8
0-1000mm/0-40"		150	62.5				R10	8	
0-1500mm*	180	129	—	32	1800	19	R10	30	8
0-1500mm/0-60"		170	62.5				R10	8	
0-2000mm*	180	129	—	40	2300	23	R10	30	12
0-2000mm/0-80"		180	78				R10	12	

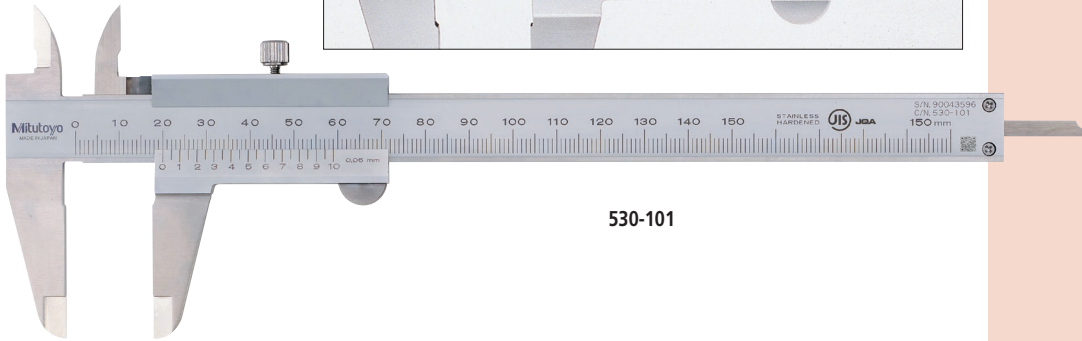
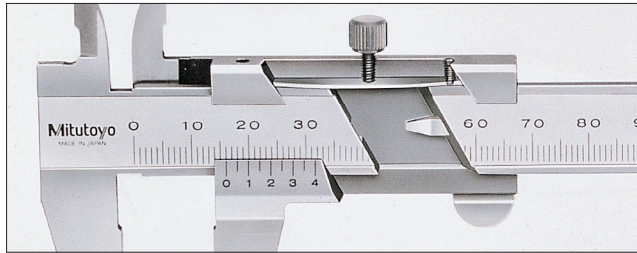
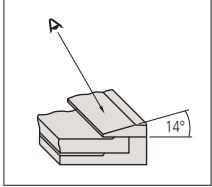
\*: without fine adjustment

# Calipers

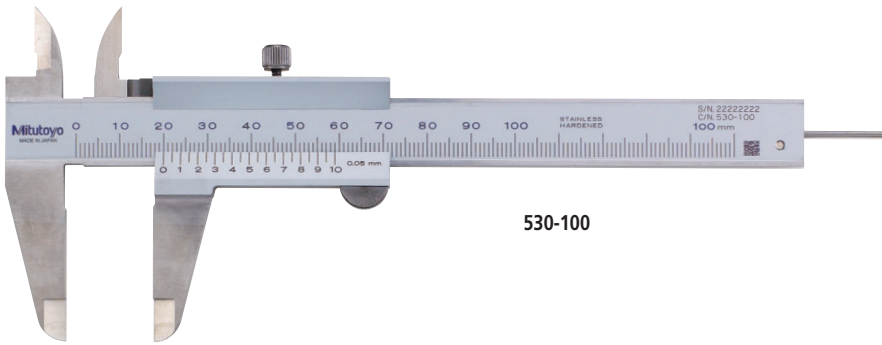
An industry standard in measuring tools

## Vernier Caliper 530 Series — Standard model

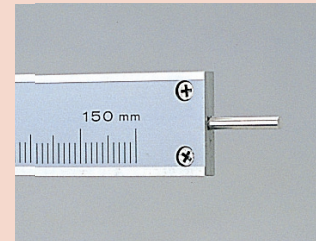
- Plain and basic design.
- Stepped graduation face prevents dust ingress between the main scale and slider.
- The small vernier face angle (14°) provides easy reading.
- Can measure outside and inside dimensions, depth, and steps.
- Carbide-tipped jaw calipers are optimal for rough finished parts, castings, grinding stones, etc.
- Decimal and fractional graduated scales (metric/inch and inch models only).



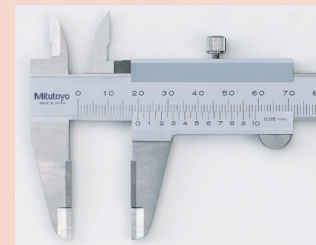
530-101



530-100

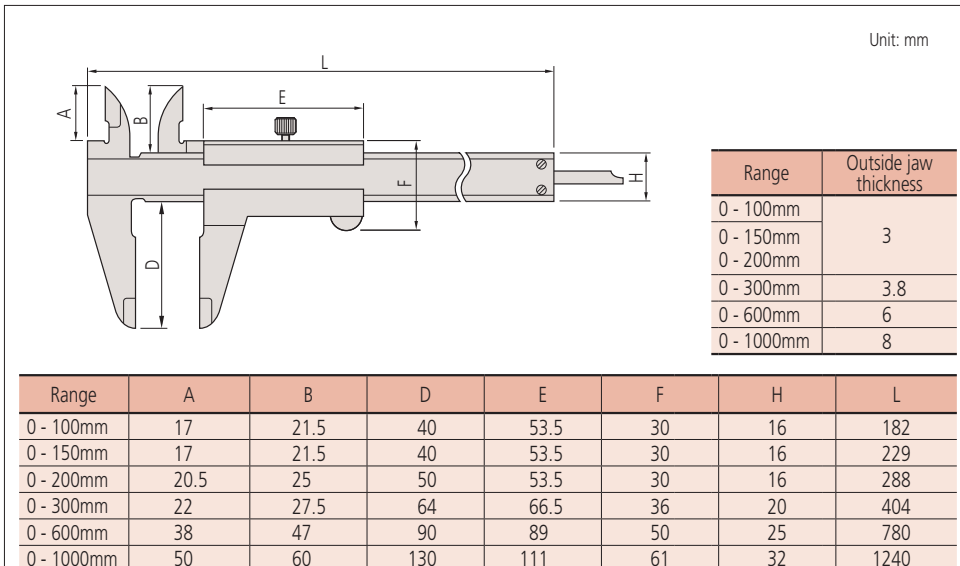


530-102 (Round depth bar type)



530-320 (Carbide-tipped jaw type)

### DIMENSIONS



\* Code No.530-100 and No.530-102 incorporate a round depth bar (ø1.9mm).  
The depth bar shown in the illustration above is a different type.

## Technical Data

Accuracy:  $\pm 0.05\text{mm}$  ( $\leq 200\text{mm}$ ),  $\pm 0.08\text{mm}$  ( $\leq 300\text{mm}$ )  
 $\pm 0.10\text{mm}$  ( $\leq 600\text{mm}$ ),  $\pm 0.15\text{mm}$  ( $\leq 1000\text{mm}$ )  
 High accuracy type:  
 $\pm 0.03\text{mm}$  ( $\leq 200\text{mm}$ ),  $\pm 0.04\text{mm}$  ( $\leq 300\text{mm}$ )  
 Graduation:  $0.05\text{mm}$ ,  $0.05\text{mm}$  ( $1/128''$ ) or  $.001''$  ( $1/128''$ )  
 High accuracy type:  
 $0.02\text{mm}$  or  $0.02\text{mm}$  ( $.001''$ )

## SPECIFICATIONS

Metric			
Order No.	Range	Depth bar	Remarks
530-100	0 - 100mm	ø1.9mm rod	—
530-102			—
530-101	0 - 150mm	Blade	—
530-320			Carbide-tipped jaws for outside measurement
530-335			Carbide-tipped jaws for outside and inside measurement
530-122*			High accuracy model: $\pm 0.03\text{mm}$
530-108			—
530-321	0 - 200mm	Blade	Carbide-tipped jaws for outside measurement
530-123*			High accuracy model: $\pm 0.03\text{mm}$
530-109	0 - 300mm	Blade	—
530-322			Carbide-tipped jaws for outside measurement
530-124*			High accuracy model: $\pm 0.04\text{mm}$
530-501	0 - 600mm	—	—
530-502	0 - 1000mm	—	—

\* Graduation: 0.02mm

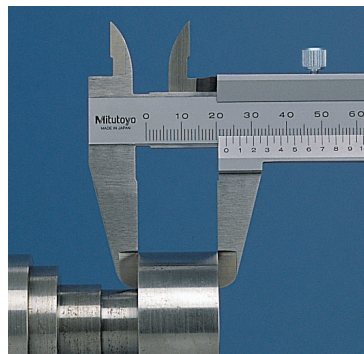
Metric/Inch with metric/inch double scale				
Order No.	Range	Depth bar	Inch graduation	Remarks
530-104	0 - 150mm	Blade	1/128"	—
530-316			1/128"	Clamping screw below the slider
530-312*			.001"	High accuracy model: $\pm 0.03\text{mm}$
530-114	0 - 200mm	Blade	1/128"	—
530-118*			.001"	High accuracy model: $\pm 0.03\text{mm}$
530-115	0 - 300mm	Blade	1/128"	—
530-119*			.001"	High accuracy model: $\pm 0.04\text{mm}$

\* Graduation: 0.02mm

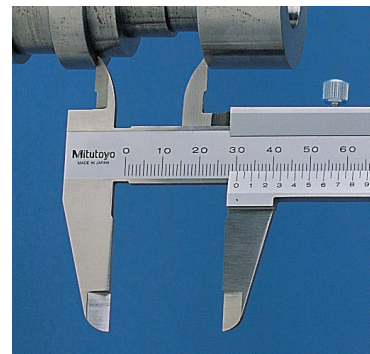
Inch with inch/inch double scale				
Order No.	Range	Depth bar	Inch graduation	Remarks
530-105	0 - 6"	Blade	1/128"	—
530-116	0 - 8"			

## Measurement Applications

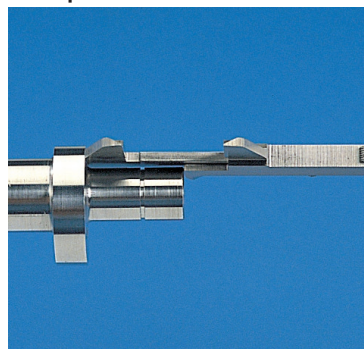
### 1. Outside measurement



### 2. Inside measurement



### 3. Step measurement



### 4. Depth measurement

